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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sami Uskela

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EXAMINER

GOLD, AVI M

ART UNIT

PAPER NUMBER

2157

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,590

Applicant(s)

USKELA ET AL.

Examiner

Avi Gold

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to the amendment filed on August 11, 2006. Claims 1-38 were amended. Claims 1-38 are pending.

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 10-22, and 25-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satran et al., U.S. Patent No. 6,430,183, further in view of Stapleton et al., U.S. Patent No. 6,175,875.

Satran teaches the invention as claimed including transmission networks of the type wherein a plurality of transmitters are transmitting streams of data frames over a broadband channel to a plurality of receivers (see abstract).

Regarding claim 1, Satran teaches a method in a packet-switched network for supplying data packets to receivers (4a-c) belonging to a multicast group, comprising the steps of:

receivers belonging to a multicast group in a packet-switched network and specific parameters of the receivers(col. 4, lines 48-60, Satran discloses address templates for filtering);

receiving data packets from a sender (col. 3, lines 31-39, Satran discloses data transmitted from a host computer);

buffering out of the data packets multicast data packets having a destination address which is a multicast address of the multicast group (col. 4, lines 48-60, Satran discloses the data transmitted being part of a multicast);

searching based on the multicast address to determine addresses of receivers of the multicast group indicated by the multicast address and the specific parameters of the receivers (col. 4, lines 48-60, Satran discloses address templates for filtering, col. 5, lines 36-43, Satran discloses a receiver searching for a particular multicast address);

filtering the multicast data packets accordance with the specific parameters for each receiver of the multicast group to obtain filtered multicast data packets (col. 5, lines 16-35, Satran discloses filtering done with a receiver specific parameter); and

supplying the filtered multicast data packets to the addresses of the receivers (col. 5, lines 33-35, Satran discloses a filtered data block received at an address).

Satran fails to teach the limitation further including storing tables of addresses of receivers and searching the tables based on the multicast address.

However, Stapleton teaches the transmission of multicast communications or other high volume traffic through a network (see abstract). Stapleton teaches the use of a table that stores multicast communication addresses (col. 7, lines 4-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Satran in view of Stapleton to store tables of addresses of receivers and search the tables based on the multicast address. One would be motivated to do so because a table is an efficient and convenient way to store information.

Regarding claim 2, Satran teaches the method of claim 1, wherein the specific parameters indicate a certain content of data packets that is not to be received by a specific receiver (col. 4, lines 48-60).

Regarding claim 3, Satran teaches the method of claim 1, wherein the specific parameters indicate a data amount of a certain content in data packets which is not to be received by a specific receiver (col. 7, lines 58-66, Satran discloses a block size that needs to be reached).

Regarding claim 4, Satran teaches the method of claim 2, wherein the certain content is filtered out during the filtering (col. 5, lines 15-43).

Regarding claim 5, Satran teaches the method of claim 2, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 6, Satran teaches a method, comprising:

receivers belonging to a multicast group in a packet-switched network and specific parameters of the receivers (col. 4, lines 48-60);

receiving data packets from a sender (col. 3, lines 31-39);

buffering out of the data packets multicast data packets having a destination address which is a multicast address of a multicast group (col. 4, lines 48-60);

searching based on the multicast address to determine addresses of receivers of the multicast group indicated by the multicast address and the specific parameters of the receivers (col. 4, lines 48-60, , col. 5, lines 36-43);

filtering the addresses in accordance with the specific parameters to obtain filtered receiver addresses (col. 5, lines 16-35); and

supplying the multicast data packets to the filtered receiver addresses (col. 5, lines 33-35).

Satran fails to teach the limitation further including storing tables of addresses of receivers and searching the tables based on the multicast address.

However, Stapleton teaches the use of a table that stores multicast communication addresses (col. 7, lines 4-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Satran in view of Stapleton to store tables of addresses of receivers and search the tables based on the multicast address. One would be motivated to do so because a table is an efficient and convenient way to store information.

Regarding claim 7, Satran teaches the method of claim 6, wherein the buffering step further includes:

detecting contents and a data amount of data packets, and wherein the filtering further includes (col. 4, lines 48-60):

filtering the determined addresses in accordance with detected results (col. 5, lines 16-35).

Regarding claim 10, Satran teaches the method of claim 7, wherein the specific parameters indicate a certain content of data packets that is not to be received by a specific receiver (col. 7, lines 58-66).

Regarding claim 11, Satran teaches the method of claim 7, wherein the specific parameters indicate a certain data amount of data packets which is not to be received by a specific receiver (col. 7, lines 58-66).

Regarding claim 12, Satran teaches the method of claim 10, wherein when the certain content is detected in the detecting step the address of the specific receiver is filtered out during the filtering step (col. 5, lines 15-43).

Regarding claim 13, Satran teaches the method of claim 11, wherein when the certain data amount is detected in the detecting step the address of the specific receiver is filtered out during the filtering step col. 5, lines 15-43).

Regarding claim 14, Satran teaches the method of claim 8, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 15, Satran teaches an apparatus, comprising:

a control unit configured to store addresses of receivers belonging to a multicast group in a packet-switched network and specific parameters of the receivers; and

a routing unit configured to receive data packets from a sender and buffer multicast data packets out of the data packets, the multicast data packets having a destination address which is a multicast address of a multicast group;

wherein the control unit is configured to communicate with the routing unit to determine the addresses of the receivers of the multicast group indicated by the multicast address and the specific parameters of the receivers by searching based on the multicast address, designate filters for each receiver of the multicast group in accordance with the specific parameters and to supply the addresses and filters to the routing unit; and

wherein the routing unit is configured to filter the multicast data packets with the filters for each receiver of the multicast group to obtain filtered multicast data packets and to supply the filtered multicast data packets to the addresses of the receivers of the multicast group (col. 3, lines 31-39; col. 4, lines 48-60; col. 5, lines 15-43).

Satran fails to teach the limitation further including storing tables of addresses of receivers and searching the tables based on the multicast address.

However, Stapleton teaches the use of a table that stores multicast communication addresses (col. 7, lines 4-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Satran in view of Stapleton to store tables of addresses of receivers and search the tables based on the multicast address. One would be motivated to do so because a table is an efficient and convenient way to store information.

Regarding claim 16, Satran teaches the apparatus of claim 15, where the specific parameters indicate a certain content of data packets that is not to be received by the specific receiver (col. 7, lines 58-66).

Regarding claim 17, Satran teaches the apparatus of claim 15, wherein the specific parameters indicate a data amount certain content in data packets which data amount is not to be received by a specific receiver (col. 7, lines 58-66).

Regarding claim 18, Satran teaches the apparatus of claim 16, wherein the certain content is filtered out by the routing unit (col. 5, lines 15-43).

Regarding claim 19, Satran teaches the apparatus of claim 16, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 20, Satran teaches the apparatus of claim 15, wherein the control means determines the receiver addresses and specific parameters via tables stored in the control unit (col. 5, lines 26-35, Satran discloses an address field stored in a bitmap).

Regarding claim 21, Satran teaches an apparatus, comprising:

a control unit configured to store addresses of receivers belonging to a multicast group in a packet-switched network and specific parameters of the receivers; and

a routing unit configured to receive data packets from a sender and buffer multicast data packets out of the data packets, the multicast data packets having a destination address which is a multicast address of a multicast group; and

wherein the control unit is configured to communicate with the routing unit to determine the addresses of the receivers of the multicast group indicated by the multicast address and specific parameters of the receivers by searching based on the multicast address, designate filters for each receiver address of the multicast group in accordance with the specific parameters and supply the addresses and designated filters to the routing unit; and

wherein the routing unit is configured to filter the address of the receivers of the multicast group with the filters for each receiver of the multicast group to obtain filtered receiver addresses, and supply the multicast data packets to the filtered receiver addresses (col. 3, lines 31-39; col. 4, lines 48-60; col. 5, lines 15-43).

Satran fails to teach the limitation further including storing tables of addresses of receivers and searching the tables based on the multicast address.

However, Stapleton teaches the use of a table that stores multicast communication addresses (col. 7, lines 4-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Satran in view of Stapleton to store tables of addresses of receivers and search the tables based on the multicast address. One would be motivated to do so because a table is an efficient and convenient way to store information.

Regarding claim 22, Satran teaches the apparatus of claim 21, wherein the routing unit detects contents and a data amount of data packets and communicates the results to the control unit which designates the filters in accordance with these results (col. 7, lines 58-66).

Regarding claim 25, Satran teaches the apparatus of claim 22, wherein the specific parameters indicate a certain content of data packets that is not to be received by a specific receiver (col. 7, lines 58-66).

Regarding claim 26, Satran teaches the apparatus of claim 22, wherein the specific parameters indicate a certain data amount of data packets which is not to be received by a specific receiver (col. 7, lines 58-66).

Regarding claim 27, Satran teaches the apparatus of claim 25, wherein when the certain content is detected by the routing unit the address of the specific receiver is filtered out by the routing unit (col. 7, lines 58-66).

Regarding claim 28, Satran teaches the apparatus of claim 26, wherein when the certain data amount is detected by the routing unit the address of the specific receiver is filtered out by the routing unit (col. 7, lines 58-66).

Regarding claim 29, Satran teaches the apparatus of claim 23, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 30, Satran teaches the apparatus of claim 21, wherein the control unit determines the receiver addresses and specific parameters via tables stored in the control unit (col. 5, lines 26-35).

Regarding claim 31, Satran teaches the method of claim 3, wherein the certain content is filtered out during the filtering (col. 5, lines 15-43).

Regarding claim 32, Satran teaches the method of claim 3, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 33, Satran teaches the method of claim 10, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 34, Satran teaches the method of claim 11, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 35, Satran teaches the apparatus of claim 17, wherein the certain content is filtered out by the routing unit (col. 5, lines 15-43).

Regarding claim 36, Satran teaches the apparatus of claim 17, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 37, Satran teaches the apparatus of claim 25, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

Regarding claim 38, Satran teaches the apparatus of claim 26, wherein the specific parameters are dependent on receiver conditions (col. 5, lines 15-43).

3. Claims 8, 9, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satran and Stapleton further in view of Haggerty et al., U.S. Patent No. 6,331,983.

Satran teaches the invention substantially as claimed including transmission networks of the type wherein a plurality of transmitters are transmitting streams of data frames over a broadband channel to a plurality of receivers (see abstract). Stapleton teaches the invention substantially as claimed including the transmission of multicast communications or other high volume traffic through a network (see abstract).

As to claims 8, 9, 23, and 24, Satran and Stapleton teach the method and apparatus of claims 6 and 21.

Satran and Stapleton fail to teach the limitation further including a time at which no data packets are to be received or filtered.

However, Haggerty teaches a method and apparatus for establishing a connection path for multicast traffic through a switched network, and across router/switch boundaries, which conserves network bandwidth (see abstract). Haggerty teaches the use of a time-to-live (TTL) (col. 2, lines 9-15; col. 4, lines 34-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Satran and Stapleton in view of Haggerty to use a time at which no data packets are to be received or filtered. One would be motivated to do so because it would allow for controlled distribution of multicast packets (col. 2, lines 3-5).

Response to Arguments

4. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,055,364 to Speakman et al., because it discloses content-based filtering of multicast information.

U.S. Pat. No. 5,933,605 to Kawano et al., because it discloses multicast messages filtered based on message content.

U.S. Pat. No. 6,175,875 to Stapleton et al., because it discloses multicast filtering.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Avi Gold whose telephone number is 571-272-4002. The examiner can normally be reached on M-F 8:00-5:30 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

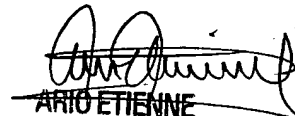
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Avi Gold

Patent Examiner

Art Unit 2157

AMG


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